THE CITY OF SAN DIEGO

MANAGER'S REPORT

DATE ISSUED: October 17, 2001 REPORT NO. 01-227

ATTENTION: Honorable Mayor and City Council

SUBJECT: Power (Battery) Backup Systems at Top 115 Priority Intersections

REFERENCE: City Manager's Report No. 01-094, dated May 11, 2001

SUMMARY

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE COMMITTEE OR THE CITY COUNCIL.

BACKGROUND

On May 15, 2001, Council approved the expenditure of $690,000 for the purpose of installing power (battery) backup systems at 115 signalized intersections. Attachment 1 is a list of the original 115 signalized intersections identified and approved by Council for battery backup. This list consists of signalized locations near freeway ramps, near railroad/trolley crossings, or with high volumes of vehicles and/or pedestrians. One location on the list is identified twice: Pacific Highway @ Rosecrans Street (#96) is the same intersection as Rosecrans Street @ Taylor Street (#98). (Thus, only 114 locations were actually approved.)

DISCUSSION

Seven of the locations from the original approved list are in the downtown area, and have controller cabinets that are too small to house the battery backup equipment. The seven locations are: First Avenue at Elm Street; Twelve Avenue at "E," "F" and "G" Streets; Twelve Avenue at Market Street; 16th Street at "F" Street; and "G" Street at Kettner Boulevard. As soon as larger cabinets are acquired, battery backup will be installed at these sites.

Sixty-one of the approved locations are exempt from rolling blackouts. In addition, San Diego Gas & Electric informed staff that thirty other potential candidates for battery backup systems are exempt from rolling blackouts. All of the exempt locations are listed in Attachment 2.

Additional locations have now been identified to replace those removed from Attachment 1. These were chosen based on high arterial volume or complexity of the signal itself. For example, a signalized intersection comprised of two major arterials intersecting and left turn phasing on both arterials is a strong candidate for battery backup. The traffic signals along Grape Street and Hawthorn Street were chosen not only because of their high traffic volume, but also because they are a major route to the City's airport at Lindbergh Field. Signals along Miramar Road and Mira Mesa Boulevard were chosen because of their high traffic volumes (approximately 70,000 vehicles per day). The intersection of Friars Road at Napa Street, a trolley crossing, was also included. The revised list of all locations for battery backup systems is shown as Attachment 3.

A battery backup location can operate in a normal mode for a minimum of two hours after power is lost if all the indications at the traffic signal are the new low energy light emitting diode (LED) technology. However, the amber indications and pedestrian indications have not been changed to LED indications at the locations receiving battery backup. If the backup locations lose power, the traffic signals will go into an all-red flash mode. The all-red flash mode may be maintained for four to eight hours. City staff is receiving bids on the amber indications, and plans to place the LED pedestrian indications out to bid in the near future.

Respectfully submitted,

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Director, Transportation

Approved: George I. Loveland
Senior Deputy City Manager

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Attachments:
1. List of Intersections Approved for Installation of Power (Battery) Backup Systems
2. List of Intersections Exempt from Rolling Blackouts
3. Revised List of Intersections for Power (Battery) Backup Systems